# Procurement Language Programmable Thermostats

## Provide programmable thermostats that meet the following guidelines:

- 1. Programmable Thermostat Settings:
  - The programmable thermostat shall have at least two different programming periods (for weekday and weekend programming) and at least four possible temperature settings (i.e., wake, day, evening, and sleep settings). Programmable thermostats settings shall be pre-programmed so the day and sleep time periods are at least 8 hours long. Partner shall ship programmable thermostats with setpoint temperatures and times as specified in Table 1 below. For a specific example of acceptable setpoint time and temperature settings, see the tables below.
- 2. The programmable thermostat shall be capable of maintaining room temperature swings within  $\pm 2^{\circ}$ F of the setpoint temperature.
- 3. The programmable thermostat shall be capable of cycling the heating/cooling equipment at the cycle rates required by all ENERGY STAR-compliant heating and cooling equipment. The cycle rate and heating/cooling anticipator setting shall be easy for installer to adjust and must remain at their installed setting even if there is an external power outage or battery failure that causes the programmable thermostat to be de-programmed.
- 4. Recovery Systems:

## **Conventional Recovery**

All programmable thermostat models shall be equipped with a conventional recovery system.

## **Heat Pump Recovery**

Programmable thermostat models marketed and sold for use with heat pump systems shall be equipped with a heat pump recovery system.

### **Pre-Comfort Recovery**

Programmable thermostat models marketed and sold for use with non-heat pump systems shall be equipped with a pre-comfort recovery system.

5. The programmable thermostat shall have a hold feature that allows the user to temporarily override the program for an unspecified period (such as a vacation), without deleting the program. It is recommended that the programmable thermostat have more than one way to override the program. For instance a long term hold (vacation) and short term hold (override to the next setpoint) is recommended.

Provide general information to users regarding the ENERGY STAR features of the programmable thermostat model.

Provide clear instructions and packaging regarding whether the programmable thermostat is intended for use with a heat pump or conventional system, instructions for the installer to adjust the cycle rates, and instructions for the user to adjust the times and temperatures for the setpoint temperatures.

Ensure that the customer may be able to change the settings on the programmable thermostat with little difficulty. The ease with which the customer can change the setback times and temperatures is of primary importance. Therefore, the programmable thermostat must include easy to follow instructions, and clearly defined settings on the programmable thermostat.

Table 1- Programmable Thermostat Setpoint Temperatures

Settings	Setpoint Temperature (heat)	Setpoint Temperature (cool)
Wake	≥ 70°F	≥ 78°F
Day	set-back at least 8°F	set-back at least 7°F
Evening	≥ 70°F	≥ 78°F
Sleep	set-back at least 8°F	set-back at least 7°F

Table 2- Acceptable Setpoint Times and Temperature Settings

Settings	Time	Setpoint Temperature (heat)	Setpoint Temperature (cool)
Wake	6 a.m.	≥ 70°F	≥ 78°F
Day	8 a.m.	≥ 62°F	≥ 85°F
Evening	6 p.m.	≥ 70°F	≥ 78°F
Sleep	10 p.m.	≥ 62°F	≥ 82°F